

Sample Package

Globalize Your Classroom

UN Sustainable Development Goals
Curriculum Series

Welcome!

Welcome to Insight Global Education's Sample Lessons! This sample includes 3 of the 18 lessons developed for our ***Sustainable Development Goals Curriculum Package***.

The first lesson in this package serves as an introduction to the Sustainable Development Goals (SDGs) and the idea of Sustainability and Development. The second lesson unpacks goal #3: 'Good Health and Wellbeing' through an interactive simulation and thought provoking discussion. The final lesson includes an interactive activity on Climate Change, to teach about goal 13, climate action.

We understand that teachers and students today are incredibly adaptable, which is why each of our lessons have been developed with options compatible with virtual learning, individual student inquiry, and group exploration.

About the Author

At Insight Global Education, we challenge students to think differently. Everything that we do, at home and abroad, is based on experiential pedagogy led by student inquiry. Our mission is to help students become global citizens.

All 18 lessons in our Sustainable Development Goals Curriculum pack are designed to provide teachers with a framework to approach complex issues with confidence. Teaching about social justice and the variety of sensitive issues covered in these lessons can be challenging. Recognizing this, Insight Global Education invites you to reach out to the team at Insight for 1:1 coaching and support. Our knowledgeable team is made up of international development graduates and teachers, ready to help you bring this content to your students.

Reach out to us here:



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SDG Curriculum Lesson Summary

I Introduction Lesson

Introduction Lesson: Through comparing the MDGs and SDGs, students will think critically about each of the goals and assess how these goals are related to one another. Students will also evaluate if these goals are achievable goals for 2030.

1 No Poverty

Goal 1: Unpack some of the theory behind poverty traps and the unique challenges that can lead to urban and rural poverty within Canada and the rest of the world. The interactive component of this lesson will help students build financial literacy as they create a household budget.

2 Zero Hunger

Goal 2: Explore some of the challenges that are faced in mitigating world hunger and feeding the future 9 Billion global population. Students will represent 10 countries in an global trade simulation, where they will work together and trade resources in an attempt to feed their population and avoid food waste.

3 Good Health & Well-being

Goal 3: Guide your students as they explore how health is influenced by the social, physical and economic circumstances that we live, work and are born into (also known as the social determinants of health). By participating in an interactive dice-rolling game, students will be able to uncover common health pathways and challenges to living a healthy life.

4 Quality Education

Goal 4: Dive into an exploration of the common barriers to education through this reflection-based activity. Students will explore the importance of education along with the short term and long term benefits of education for people around the world.

5 Gender Equality

Goal 5: Explore how gender inequities are experienced around the world through this game of life featuring fact-based scenario cards. Students will uncover forms of gender discrimination and biases that are present in communities around the world, as well as in Canada.

6 Clean Water & Sanitation

Goal 6: Using a human rights lens, students will unpack clean water and sanitation through a student-led inquiry-based research activity. Students will explore common barriers to accessing clean water and sanitation across the world and in Canada with a focus on Canadian Indigenous communities.

7 Affordable & Clean Energy

Goal 7: Learn about the pros and cons of various forms of renewable energy through guided research and debate with fellow students. In this lesson students will represent various stakeholders pitching a clean energy plan for an imaginary country, "Country X."

8 Decent Work & Economic Growth

Goal 8: Learn about issues of forced labour that persist in today's world, as well as some of the steps that the international community is taking to solve these issues. This lesson will also introduce students to the challenges faced by the world's migrant worker population, with a particular focus on women migrant workers and migrant workers within Canada.

SDG Curriculum Lesson Summary

9 Industry, Innovation, & Infrastructure

Goal 9: Unpack what it means to build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation. In this decision-based activity, students will consider the needs of their city to ensure community health and safety with limited resources.

10 Reduced Inequalities

Goal 10: Explore how inequalities impact various aspects of life through the lens of a hypothetical job search. Students will learn about inequalities faced in the world today, and discover ways to reduce them by comparing equity and equality.

11 Sustainable Cities & Communities

Goal 11: Dive into the concepts of urbanization and sustainability and discover various ideologies for what makes a sustainable city. By designing their own ideal city, as well as using online resources to compare and contrast various global cities, students will explore “People, Profit, and Planet” as factors of sustainability.

12 Responsible Consumption & Production

Goal 12: Uncover surprising information about production chains of everyday items through an engaging “Price is Right” activity. By breaking down the cost of locally made and internationally made products, students will gain perspective on the impact of their purchases and how they can make a difference by voting with their dollars.

13 Climate Action

Goal 13: Get to the root causes of climate change by exploring how students everyday actions contribute to their carbon footprint. Students will gain perspective on the actions they can take to reduce their environmental impact and promote conservation.

14 Life Below Water

Goal 14: Examine the challenges of working in a natural resource industry in an interactive simulation based on Canadian Fisheries. Students will compete to create the most profitable business in fishing or aquaculture leading into a reflection about overfishing, aquatic sustainability, and the tragedy of the commons.

15 Life On Land

Goal 15: Challenge your students to balance profits and conservation in this forestry management simulation. This decision-based activity built from a case study of the Amazon rainforest will guide students to reflect on the intrinsic and extrinsic value of land-based natural resources.

16 Peace, Justice & Strong Institutions

Goal 16: Understand the difference between “positive peace” and “negative peace”, and discover some indicators for how the global community measures peace. Students will also explore the role of strong institutions, civil society and citizen action in maintaining a peaceful, just society.

17 Partnerships For The Goals

Goal 17: Evaluate, assess and prioritize the SDGs in this interactive Model UN simulation. Role playing 14 different countries, students will work together to write new policies that achieve their country specific goals, highlighting the importance of collaboration and partnership in achieving the SDGs.



Lesson: Introduction to the Sustainable Development Goals

Introducing the UN's 17 Goals, to be achieved by 2030

Lesson Overview | Introduction to the SDGs

Lesson Description

The UN created the Sustainable Development Goals (SDGs) in 2015, following the expiration of the Millennium Development Goals (MDGs). These seventeen goals were developed to improve the lives of people and the planet by 2030. Both the MDGs and the SDGs reflect current global challenges and outline potential solutions to solving these problems. In this lesson, students will think critically about each of the goals and assess how these goals are related to one another, as well as evaluate if these are achievable goals for 2030.

Guiding Questions:

1. What are the ‘Sustainable Development Goals’? What is the role of the UN?
2. How do the Sustainable Development Goals differ from the Millennium Development Goals?
3. Are the Sustainable Development Goals realistic/achievable?

Learning Goals:

1. Students are able to compare and contrast the Sustainable Development Goals with the Millennium Development Goals
2. Students are able to identify relationships between the SDGs.
3. Students able able to evaluate and assess progress/ achievability of the SDGs
4. Students are able to formulate arguments in support of the different SDGs

Materials:

- A white board, black board or flip chart paper
- A powerpoint projector that can display video with sound
- Introduction to Sustainable Development [Powerpoint](#)
- Student Handouts: (Printed version or digital version on computers)
 - [Intro to the Sustainable Development Goals](#)
 - [Comparing the MDGs and SDGs](#)
- Activity Cards: (Printed version or digital version on computers)
 - [SDG Foldable Cards](#) (Goals and Targets)

Subjects:

- Social Studies (Geography, Human Geography, History, Law)
- Civics and Careers / Career Education
- Oral Communication/ Debate
- Social Justice

Action Plan:

Minds On: Hook (20 - 30 Minutes)

Intended to activate prior knowledge, this Minds On activity will allow students to share what they already know about Sustainability and Development while introducing the Sustainable Development Goals and their author, the United Nations.

Brainstorm and Define (5 mins)

- Development
- Sustainability
- The United Nations

Note: This brainstorm can be done individually or in small groups. Before students begin, provide some examples for each to begin the brainstorming process together. Ex: Development might make you think about things improving or new housing being built in an underserved community. Sustainability might make you think about things being 'green' or 'zero-waste'.

Watch the Video: ["We the People" for the Goals](#) [Watch full 3 mins]
(For fun you might ask students if they recognized anyone from this video!)

Discussion Questions (5 mins)

- Have you heard about the Sustainable Development Goals before?
- What do you already know?
- Do you think these goals sound achievable? Why/ Why not?

Hand-out: [MDGs vs. SDGs Worksheet](#) (5 -10 mins)

- Independently or in groups, have students review the list of SDGs vs. MDGs

Discussion Questions (5 mins)

- What did you notice comparing these goals?
- How are they similar or different?
- What does this say about the progress that is being made on these initiatives?

Teachers may want to highlight: MDGs were developed in 2000 with the goal to be complete by 2015. Did the world accomplish this goal? Many of the MDG and SDG goals are similar and still being worked on. One of the biggest differences is the number of environmental initiatives that have been unpacked in the SDGs. Why do you think there has been a rise in environmental concern?

Hands On: Analyze & Explore (30 - 40 Minutes)

In this activity, students will be ranking and analyzing the interconnected nature of the SDGs. Students can work individually or in pairs, but must each be assigned to one of the 17 goals. In activity #1 (Ranking the Goals) students working on the same goal will work together, however, in activity #2 (Triangles), each student will need to think independently.

Hands On: Analyze & Explore (continued)

Activity #1: Ranking the Goals (15 - 20 mins)

1. Assign each individual student (or pair of students) one [SDG Foldable Card](#). These can be folded and arranged on a table or other flat surface, or arranged on a board with magnets/tape. For online compatibility, arrange moveable icons on powerpoint slide.
2. Give students 5 - 7 minutes to review the targets listed on the back of each card. They may use this time to ask any clarifying questions about the targets to their group mates and teacher. They may also need to use a dictionary or do some research on the [UN website](#).
3. Each student will have 30 seconds to present the importance of their goal to the group. They must then place their goal on a line from Most Important to Least Important compared with the other goals.
4. Once each team has had a turn, allow students to suggest adjustments to the order selected. (Ex: I think goal _____ belongs ahead of goal _____ because...)
5. Allow order adjustments to continue for 5-10 minutes. The teacher will adjudicate a vote if students in the class cannot agree on an order.

Reflection Questions:

- How did you evaluate each goal?
- Did everyone agree to the order at the end of the activity? Why / Why not?
- What might this represent in real life?

Teachers may want to highlight: *It is suggested that you give students a time limit so that they are motivated to make suggestions quickly. At the end, you may want to highlight that Nations and charitable organizations often have limited resources and need to prioritize initiatives as demonstrated in this activity. Some goals are able to attract more public attention and as a result are better funded.*

Activity #2: Triangles with the SDGs (15 - 20 mins)

Option 1: If large open space is available (ex: gymnasium)

1. Assign each individual student one SDG card.
2. Have students stand in a circle in an open space. Students must hold their card with the goal facing the group and their targets facing themselves.

Note: There are only 17 goals so you may need to print more than one copy of each goal. You can assign two people the same goal but it is important that each student have their own goal page. If there are more than 30 students you may consider running the activity with two circles.

3. Instruct each goal to pick two goals that are most directly related to the success of their goal- these will be called partner goals. (Ex: students can argue that “No Poverty” is most directly linked to “Decent Work and Economic growth” because earning a living wage is important for getting out of poverty.) Students should keep their choices secret at this point.
4. Once each individual or pair has picked the two partner goals, tell students to move in order to form an equilateral triangle with their partner goals.
5. Once students have moved into place, read out one of the scenarios below or create your own that force one goal to move at a time.

Hands On: Analyze & Explore (continued)

Examples Continued:

- *Goal # 2: Zero Hunger take 4 steps backwards. Crops failed in South America causing a widespread famine.*
- *Goal #3: Good Health and Wellbeing take 4 steps forward. Mental health is now receiving significant funding across Europe.*
- *Goal #5: Gender Equality take 2 steps forward. Formal education for all children (all genders and all abilities) is made mandatory in a new country.*
- *Goal #9: Industry and Infrastructure take 2 steps backwards. An earthquake in Mexico has destroyed many buildings, including new sustainable city developments.*
- *Goal #13: Climate Action take 5 steps forward. New Green Energy Regulation has been passed.*
- *Goal #14: Life below Water take 4 steps backwards. A massive oil spill off the Gulf of Mexico has destroyed many coastal ecosystems in the region.*
- *Goal # 17: Peace, Justice... take 3 steps backwards. Conflict has broken out in Kashmir.*

6. After each scenario, give students a moment or two to adjust in the event their 'partner goals' have moved. Once students have adjusted back into an equilateral triangle with their partner goals, read another scenario.
7. Continue for 5-10 minutes reminding students to keep track of their partner goals.
8. Conclude by having students guess which goals were related to them and revealing to the rest of the group which goals they selected at their partner goals.

Note: The intention behind keeping partner goal choices secret until the end of the game is to encourage the idea that all goals are interconnected, and progress/change to one goal may have unexpected impacts on others. This game will be active and potentially messy at times - please remind students to remain focused on their chosen partner goals.

Option 2: Online or in a classroom

1. Assign each student (or pair) one SDG.
2. Instruct students to review all the goals and select two goals that are most directly related to the targets and success of their SDG.
3. On their handout, have students draw two lines connecting their goal with their 'partner goals'.
4. Once everyone has finished have students guess who they think was related to them before revealing who they had selected as their partner goals.
5. All students can record the variety of connections on their handout. This should result in the connections forming a web.

Teachers may want to highlight: *Remind students that there are no right or wrong answers. They must select the partner goals that they think relate more, but each student might identify different connections.*

Consolidation: Reflect & Connect (15 - 20 Minutes)

On the handout, ensure students have mapped connections between the goals and can explain each connection. Students are encouraged to think creatively about the ways different goals connect.

Reflection Questions:

1. Were you surprised by any of the connections between the goals?
2. Are there any other goals that you think might have a direct (or indirect) impact on the success of your goal?
3. Has this exercise changed your opinion about how achievable these goals are? Why/ Why not?

Extensions for Further Learning:

Check out the pre-COVID assessment of our progress towards the goals on **Page 8** of the the [‘Sustainable Development Goals 2020 Outlook Guide’](#)

Think about it: Other than Goal #4 (Good Health and Wellbeing), which goals do you think COVID has impacted most? Why?

To learn more about the impacts of COVID 19 on each goal, visit [UN.org](https://www.un.org) to read more about the impacts and what is being done in response to COVID-19.

Modifications:

- Strategic grouping/pairing of students will allow for all students to participate in activities.
- Provide a list of Key Vocabulary (listed on the next page) prior to the start of the lesson for students who need more guided support.
- Model brainstorming or do brainstorming together as a class.
- Simplify the text included in the ‘Targets’ on the foldable cards or allow time for students to look up new terms.

Definitions

Development	A broad concept related to initiatives designed to promote growth as it relates to society.
Global Citizenship	Being an engaged and educated member of the global community and taking action that supports and furthers the community’s values and practices.
Millennium Development Goals	A set of 8 goals created by the United Nations in 2000 to improve the lives of people and the planet by 2015.
Partnership	The state of being partners and working together collaboratively to achieve a goal.

Definitions (Continued)

Sustainability	Development that meets the needs of the present, without compromising the ability of future generations to meet their own needs.
Sustainable Development Goals	A set of 17 global goals created by the United Nations to improve the lives of people and the planet by 2030.
The United Nations	An international organization formed in 1945 to increase political and economic cooperation among member countries. The organization works on economic and social development programs, improving human rights and reducing global conflicts.

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Lesson: Goal #3

Ensure healthy lives and promote well-being for all at all ages

Lesson Overview | Goal #3

Lesson Description:		
<p>Health is not just the absence of illness, but an individual’s state of complete physical, mental and social well-being (WHO). An individual’s health is also heavily determined by the environment they live in and by various social implications. In this lesson, students will gain a broader understanding of how social and environmental factors get “under the skin” to impact physical health.</p>		
Guiding Questions:		Learning Goals:
<ol style="list-style-type: none"> 1. What are the Social Determinants of Health? 2. How do social and environmental factors get “under the skin” to impact people’s physical health? 3. What is Health Equity / Health Inequity? 4. How do health inequities present in Canada? 		<ol style="list-style-type: none"> 1. Students can define health by the WHO standard. 2. Students will understand the interconnectedness of physical health, their environment, and other social factors. 3. Students can define the social determinants of health. 4. Students can identify various pathways to health, and identify potential intervention strategies.
Materials:		
<ul style="list-style-type: none"> • A white board, black board or flip chart paper • A powerpoint and projector that can display video with sound • Goal 3 Powerpoint • Computer / Tablet access (one per student group of 4-5) • Activity 1: SDoH Game <ul style="list-style-type: none"> ◦ Score Sheet Handouts (one per student) OR Online Score Sheet ◦ Instructions Handouts (at least one per group) ◦ Multiple dice (Minimum of one per group of 4- 5) OR Online Dice • Activity 2: Worksheet (Optional) 		
Subjects:		
<ul style="list-style-type: none"> • Social Studies (Geography, Human Geography, History, Law) 	<ul style="list-style-type: none"> • Global Issues • Science • Health 	<ul style="list-style-type: none"> • Civics and Careers / Career Education • Social Justice

Action Plan:

Minds On: Hook (15 Minutes)

Break students into groups and facilitate a brainstorm on the following 3 questions. Give the students 1-2 minutes to brainstorm in their groups, and then facilitate a class-wide discussion on each question. A mind map on the board can be useful in displaying student responses.

1. What is health?
2. What are some things that you do to keep yourself healthy?
3. What factors of your daily life impact your health?

Next, watch this video on [Health Inequities in Canada](#).

Hands On: Analyze & Explore (45-60 Minutes)

Activity #1: Social Determinants of Health - A Game of Chance (30-45 mins)

This game will exemplify various pathways that social and environmental factors can get “under the skin” to influence health. Through the course of this game, a variety of chance scenarios will determine the health of each student’s hypothetical character. The goal of this game is for students to achieve the highest health score for their character.

1. Break students into groups of 4-5. They will each do the activity individually, but reflect as a group. Hand out an instructions package to each group, and give a scoresheet to each student (printed or online compatible)
2. Define the Social Determinants of Health and Socioeconomic Status (definitions in powerpoint).
3. **Part 1:** First, students will determine their Socioeconomic Status Score. SES is one of the primary predictors of health and is composed of Education, Income and Occupation. This step also stresses the influence of discrimination and government policy on health.
 - a. Start at step one, roll a single dice, and note down the score associated with the number they rolled.
 - b. Be careful to follow all of the rules noted in the Rules column.
 - c. Continue this from steps 1-5.
 - d. Once students have completed steps 1-5 (and the sub-steps 3.1 & 3.2 if necessary) sum up the scores to find a total SES Score.
 - e. Compare the summed scores to the Low and High SES status brackets listed on the worksheet, and circle your character’s SES bracket.

Hands On: Analyze & Explore (continued)

4. Conduct a mid-game check-in with the following questions:
 - a. How many of your characters have a Low SES?
 - b. How many of your characters have a High SES?
 - c. Which factor was most influential in determining this?

Now, instruct students to move to the table (or tab) associated with their SES Bracket.

5. Part 2: Students will move through steps 6-13, following the same rules (role, score, follow the rules and sum their score).
 - a. At the end, they will find the sum total of the SES score and steps 6-13.
 - b. The final number represents their character's overall health score.
6. Perform a class demonstration. As a full class, ask all students to stand up. In sequence and from lowest to highest, call out various potential scores. If students did not achieve that health score, they will sit down.
 - i. Sit down if your score was less than -40.
 - ii. Sit down if your score was less than -20
 - iii. Sit down if your score was less than 0
 - iv. Sit down if your score was less than 10
 - v. Etc.... until you get to 70.

All of the students left standing will represent the most privileged people in society and thus who are most likely to be the most healthy. Tell the class what the highest and lowest scores could have been.

Likely, most of the scores will have landed somewhere in the middle between -40 and 83, representing an average.

7. In groups, students will reflect on the following questions:
 - a. Arrange your group's health scores from lowest to highest.
 - b. Which events were most impactful in determining your health score? In real life, why would this event have such a large impact?

Hands On: Analyze & Explore (continued)

- c. Compare the score values, outcome probabilities and trends that differ between the High SES chart vs. the Low SES chart. What do you notice about the associated scores, rules, and probability of obtaining certain indicators of health?

Hints for educators:

- i. *Depending on whether students are playing within the Low or High SES score chart, they will have different likelihoods of exhibiting various health behaviours.*
 - ie) *While it is not impossible for someone with a low SES standing to abstain from tobacco use, it is more likely that they will use tobacco than someone of high SES status.*
 - ii. *Certain traits limit future progression.*
 - ie) *If you only have an elementary school education, you become ineligible for a high income.*
 - iii. *Tip: SES should be the main determinant of your overall health score.*
 - iv. *Tip: Stress is equally likely amongst Low and High SES groups, but High Stress negatively impacts Low SES to a greater degree.*
- d. How does this game demonstrate how social and environmental factors can create health inequalities in a community?
- e. This exercise should show that health is not just a product of an individual's physical health. Reflecting on the event that had the greatest impact on their character's health score, students will think about this question:

If your character was a member of your community, what could be done to improve their health?

Examples for teachers:

ie) If a character did not complete high school, implement a free high school course upgrading program in night school. This may increase the character's job potentials, which may increase their income.

Or, if a character has poor nutrition, implement a fruit and vegetable delivery program to low-income households with "ugly" produce that would otherwise be discarded from grocery store sales, but is perfectly good to eat.

- h. Students can share their ideas with their group (or the class!)

Consolidation: Reflect & Connect (Time Allotment)

Activity 2: Exploring Health Inequalities in Canada (20 Mins)

*Take-Home Option

***Note to Teachers:** We recommend that teachers explore the [Health Inequalities Data Tool](#) in advance, as there is potential for sensitive topics to come up (ie. race, sexuality, disability, etc)

Instructions:

1. Optional: Hand out [this worksheet](#) and ask students to work through it. (Option to take home)
2. Have each student group visit the [Health Inequalities Data Tool](#) on the Canadian Government Website:
 - a. Have each student set their inequalities measures to the following:
 - i. Geography: Canada
 - ii. Framework Components: Disease/Health Condition
 - iii. Indicator: have each group choose a different health indicator
 - iv. Stratifier: Overall (to start)
 - v. Measure: Crude Rate / Rate (to ensure proportional comparisons amongst populations)
 - b. Have the students explore the indicators of health by answering the following questions:
 - i. What do you notice when you change the Stratifier to different population groups within Canada? Which stratifiers had the biggest impact on the prevalence of your health indicator? Which had the least impact?
 - ii. What do you notice when you change the Geography to specific provinces? Which provinces are affected most by your health indicator? Which are least affected?
 - iii. Click on the tab titled "Data - Rates by Province/Territory," how does this health indicator impact provinces comparatively?
 - iv. If there is extra time, students can play with the tool to gather more information on different health indicators, framework components, etc.
 - c. Have one member from each group share their findings on their health indicator with the class in a 1 minute summary.

Suggested discussion questions for this unit:

1. Why are different populations across provinces, cultural groups, and income levels differently affected by disease or other health indicators?
2. What have you learned about the social determinants of health?
3. What public health measures are in place in your community / your school's community?
4. How might social determinants of health differ in developed countries like Canada, compared to the global south? How might they be the same?
5. How can understanding social determinants of health inform Canada's health policies?

Extensions for Further Learning:	Modifications:
<ul style="list-style-type: none"> • CBC- The Health Cost of Being Poor. • Global News on Inequalities and Covid-19 Pandemic. • Celebrities hidden role in public health. • Discrimination: A Social Determinant of Health Inequities. 	<p>What can teachers do to support students with Additional needs or English Language Learners?</p> <ul style="list-style-type: none"> • Activity 1: Students can complete the game in groups, rather than as individuals. Lead the reflection as a full-class discussion. • Activity 2: Option for educators to assign health indicators to groups. Alternatively, educators can explore the data tool in front of the class.

Definitions	
Discrimination	Discrimination is unequal treatment based on physical characteristics or social group assignment.
Health	Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. (WHO)
Health Equity	Health equity is the absence of unfair systems and policies that cause health inequalities. Health equity seeks to reduce inequalities and to increase access to opportunities and conditions conducive to health for all. (Canada Gov)
Health Inequity	Health inequity refers to health inequalities that are unfair or unjust and modifiable. For example, Canadians who live in remote or northern regions do not have the same access to nutritious foods such as fruits and vegetables as other Canadians. (Canada Gov)
Health Behaviours	Health behaviours are influenced by the social, cultural and physical environments in which we live and work. They are shaped by individual choices and external constraints. Positive behaviours help promote health and prevent disease, while the opposite is true for risk behaviours. Common Health Behaviours include Fruit & Vegetable Consumption, Alcohol Consumption, Physical Activity and Tobacco Use.
Public Health	The art and science of preventing disease, prolonging life and promoting health through the organized efforts of society.

Definitions (continued)

Social Determinants of Health	The social determinants of health (SDoH) are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life.
Socioeconomic Status	The most fundamental causes of health disparities are socioeconomic inequalities. Socioeconomic status has traditionally been defined by education, income, and occupation.

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Lesson: Goal #13

Take urgent action to combat climate change and its impacts

Lesson Overview | Goal #13

Lesson Description:

Climate change is one of the most pervasive threats that the earth currently faces, making climate action more important now than ever. In this lesson, students will gain a deeper understanding of the science and impact of climate change. Through a decision based simulation game, students will attempt to balance the needs of a population, the economy and the environment while attempting to avoid raising the global temperature above 2°C (a global environmental threshold).

Guiding Questions:

1. What is Climate Change and how does it impact the planet?
2. What are some of the key contributors to climate change?
3. What are some effective ways to mitigate climate change?
4. How are various countries and populations differently impacted by climate change?

Learning Goals:

1. Students understand the basic science behind climate change.
2. Students can explain some key contributors to climate change.
3. Students can list some effective ways of mitigating climate change.
4. Students can explain why various populations are differently impacted by climate change.

Materials:

1. A screen and projector with video & sound capabilities.
2. [Goal 13 Powerpoint](#)
3. Climate Control Score Sheet: [Online](#) or [Printed](#)
4. If using online scoresheet, student groups will need computers.

Subjects:

This lesson will be well-suited for:

- Social Studies
- Science Classes
- Business
- Social Justice

Action Plan:

Minds On: Hook (15 Minutes)

As a class, facilitate a brainstorm on the question “what is climate change?”. Option to build a mind map about climate change.

Watch this [Bill Nye Video on Climate Change](#) (4:09)

After watching the video, facilitate a discussion on the following questions:

- What causes climate change?
- What does climate change look like?
- Who is affected by climate change?

Teachers may want to highlight: while students may not see the impacts of climate change every day, the effects are disproportionately felt by the global south and remote communities (small island nations, etc). These communities also often contribute less to climate change.

Hands On: Analyze & Explore (30 Minutes)

Activity #1: Climate Control

In this activity, students will represent a fictional country, and make decisions that may or may not contribute to climate change. Each country is developing and while the population has all of their basic needs met (food, water, shelter), the citizens have changing wants and needs.

Students are challenged to make decisions and balance the wants and needs of their citizens (social impact), the environment (environmental impact) and the economy (economic impact) while avoiding a global temperature increase of more than 2 degrees (a global climate threshold to be unpacked in a video to follow).

Objective: Make choices for your population in order to;

1. Gain a score of 12 or higher in the Social, Environmental and Economic categories.
2. Control your climate (do not exceed a 2°C temperature increase)

Students win if they achieve both of the above rules. If they do not, they fail.

Instructions:

1. In a series of 10 rounds (following the activity scoresheet and slides), students will make choices that will best suit the needs of your citizens, the economy and the environment.
2. The impact on the earth’s temperature will only become apparent once a choice has been made.
 - a. The online compatible worksheet will show social, economic, environment and temperature impacts after choices are made.
 - b. The slides have these impacts hidden with an animation. If using print scoresheet, Instruct students to copy down the impact scores.

Hands On: Analyze & Explore (Continued)

- At the end of the game, instruct students to sum their Social, Economic and Environment scores (or read the automatically summed score on the online score sheet).
- Find the total sum of the temperature increases (or read the automatically summed temperature increase on the online score sheet).

Students win if they 1) gained 12 or more points in each category and 2) did not raise the global temperature by 2°C/

How to use the scoresheet:

Online Version:

- Students can read each scenario, and check the box associated with their choice.
- Students should continually assess their Social/ Econ /Enviro impact scores and weigh the pros and cons accordingly to make their choice.
- The impact of their choices will only appear once the box is checked.

Print Version:

- Students choose which option will suit their population best.
- After they choose, the powerpoint slides will tell them the impact values. Students write those values in the associated boxes.
- Students manually sum each total value at the end of the game.

Subject	Need/Want	Options	Choice	Impact (Social, Environment, Economic)	Impact (Temperature in °C)
Energy Production	Your citizens want a readily accessible source of electricity.	Option A: Invest in clean energy sources like wind and solar.	<input type="checkbox"/>	Social: 0 Econ: 0 Enviro: 0	0
		Option B: Use inexpensive fossil fuel sources.	<input checked="" type="checkbox"/>	Social: 1 Econ: 2 Enviro: 0	0.5

- Online Version:* A summary of student's ongoing scores and temperature is listed in the summary box (to the right)
- Print Version:* Students should sum these scores manually to determine if they succeeded or not.

Score & Temperature Summary	
Thermometre: (do not exceed 2°C)	0.5
Score 12 for each category	Social Score: 1
	Economic Score: 2
	Environmental Score: 0

In small student groups or as a full class, facilitate a discussion on the following questions:

- How much did your choices raise the global temperature?
- Which decision had the biggest impact on your final temperature? Why do you think this would be the case in real life?
- What are your final Social / Economic / Environment Scores?
- Was it difficult to gain 12 points in all 3 categories while not impacting the global temperature?
- Did your choices tend to favour one category more than others (Econ, Social or Enviro)? Why or Why not?
- How can this activity be related to the real world? Do you think the real world attempts to balance Social, Environmental and Economic impact?

Hands On: Analyze & Explore (Continued)

Teachers may want to highlight: This game has been designed to highlight the interconnectedness of the environment, economy and social good. Our actions and choices have impacts that may be unexpected and it is difficult, yet necessary to prioritise each category. The fact that we do not always know the impact of our choices before we make them can lead to problems. As countries continue to develop, choices and sacrifices continue to be necessary in order to keep the people, the environment, and the economy happy and healthy.

Play [this video](#) (3:55) explaining the impact and significance of a 2°C global temperature increase.

Consolidation: Reflect & Connect (20 Minutes)

This activity highlights the unique case study of Bhutan, which is not only carbon neutral, but carbon negative. It also highlights how populations across the world are differently impacted by climate change.

Watch the first 10 minutes of [this video](#) by the Prime Minister of Bhutan.

Facilitate a discussion with the following suggested questions:

1. What did you learn from this video?
2. Why is Bhutan carbon negative?
3. What lessons can the rest of the world take from Bhutan to reduce their carbon footprint?
4. What aspects of Bhutan’s climate action are exclusively useful to Bhutan?
ie. Bhutan's geography and culture play a large role in the climate efforts they have made.
5. Why is Bhutan impacted by climate change, even when they do not contribute to it?
6. How is Bhutan’s Happiness index related to their climate success?

Additional discussion questions:

1. What habits can you change to reduce your impact on climate change?
2. How is your community working to mitigate climate change?
3. How can your community do more to mitigate climate change?
4. What barriers are preventing your community/city/community from taking further action on climate change?

Extensions for Further Learning:

1. Carbon Footprint Calculators:
 - [Carbon Calculator Quiz](#)
 - [Carbon Calculator Quiz 2](#)
2. National Geographic Film: [Before the Flood](#)

Modifications:

- Students can complete the climate control activity in groups, or it can be performed as a class (entire class can vote to make their choices).
- Discussions and reflections can be held in small groups, or as a full class.

Carbon Footprint	The amount of Carbon Dioxide emissions associated with the activities of person, or other entity.
Carbon Negative	Where an entity offsets more carbon dioxide emissions than they produce.
Carbon Neutral	Where the net amount of carbon dioxide or other carbon compounds emitted into the atmosphere is reduced because it is balanced by actions that reduce or offset these emissions.
Carbon Offset	an action or activity (such as the planting of trees or carbon sequestration) that compensates for the emission of carbon dioxide or other greenhouse gases to the atmosphere
Deforestation	The action or process of clearing forests.

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